SGCWEBSOCKETS · TECHNICAL DOCUMENT

Socket.IO API

Socket.IO v4 client for Delphi — engine.io transport plus rooms, namespaces and acknowledgments.

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Overview

Socket.IO is a JavaScript library for real-time web applications. It enables real-time, bi-directional communication between web clients and servers. It has two parts: a client-side library that runs in the browser, and a server-side library for Node.js. Both components have a nearly identical API. Like Node.js, it is event-driven.

At a glance

COMPONENT CLASS
`TsgcWSAPI_SocketIO`

STANDARDS / SPEC
Socket.IO v4 documentation

TRANSPORTS
TCP, TLS

PLATFORMS
Windows, macOS, Linux, iOS, Android

FRAMEWORKS
VCL, FireMonkey, Lazarus / FPC

EDITION
Standard / Professional / Enterprise

Features

- Native Delphi implementation with full ANSI/Unicode support.

Technical specification

Standards & specs	Socket.IO v4 documentation · Socket.IO protocol
Component class	`TsgcWSAPI_SocketIO` (unit `sgcWebSocket_API_SocketIO`)
Frameworks	VCL, FireMonkey, Lazarus / FPC
Platforms	Windows, macOS, Linux, iOS, Android

Main properties

The principal published / public properties used to configure and drive the component. Consult the online help for the full list.

`Client`	Published or public property used to configure or query the component.
`IO_HeartBeatTimeout`	Published or public property used to configure or query the component.
`SocketIO`	Published or public property used to configure or query the component.
`RawMessages`	Published or public property used to configure or query the component.
`OnHTTPConnectionSSL`	Published or public property used to configure or query the component.
`OnHTTPRequest`	Published or public property used to configure or query the component.
`OnAfterConnect`	Published or public property used to configure or query the component.
`IO_CloseTimeout`	Published or public property used to configure or query the component.
`IO_SessionId`	Published or public property used to configure or query the component.
`Version`	Published or public property used to configure or query the component.

Main methods

The principal public methods exposed by the component.

`Ping()`	Public procedure exposed by the component.

Quick Start

Drop the component on a form, configure the properties below and activate it. The snippet that follows shows the typical **Binance | Connect WebSocket API** configuration sourced from the online help.

> **About this scenario.** In order to connect to Binance WebSocket API, just create a new Binance API client and attach to TsgcWebSocketClient.

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oBinance := TsgcWSAPI_Binance.Create(nil);
oBinance.Client := oClient;
oClient.Active := True;
```

C++ Builder

```
TsgcWebSocketClient *oClient = new TsgcWebSocketClient(NULL);
TsgcWSAPI_Binance *oBinance = new TsgcWSAPI_Binance(NULL);
oBinance->Client = oClient;
oClient->Active = true;
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Binance oBinance = new TsgcWSAPI_Binance();
oBinance.Client = oClient;
oClient.Active = true;
```

Common scenarios

The following scenarios are lifted verbatim from the online help. Each shows the configuration and method calls needed to drive the component through a specific real-world flow.

1 · Bitmex | Connect WebSocket API

In order to connect to Bitmex WebSocket API, just create a new Bitmex API client and attach to TsgcWebSocketClient.

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oBitmex := TsgcWSAPI_Bitmex.Create(nil);
oBitmex .Client := oClient;
oClient.Active := True;
```

C++ Builder

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Bitmex oBitmex = new TsgcWSAPI_Bitmex();
oBitmex→Client = oClient;
oClient→Active = true;
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Bitmex oBitmex = new TsgcWSAPI_Bitmex();
oBitmex.Client = oClient;
oClient.Active = true;
```

2 · Coinbase | Connect WebSocket API

In order to connect to Coinbase WebSocket API, just create a new Coinbase API client and attach to TsgcWebSocketClient. See below an example:

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oCoinbase := TsgcWSAPI_Coinbase.Create(nil);
oCoinbase.Client := oClient;
oClient.Active := True;
```

C++ Builder

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Coinbase oCoinbase = new TsgcWSAPI_Coinbase();
oCoinbase->Client = oClient;
oClient->Active = true;
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Coinbase oCoinbase = new TsgcWSAPI_Coinbase();
oCoinbase.Client = oClient;
oClient.Active = true;
```

3 · Kucoin | Connect WebSocket API

In order to connect to Kucoin WebSocket API, just create a new Kucoin API client and attach to TsgcWebSocketClient.

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oKucoin := TsgcWSAPI_Kucoin.Create(nil);
oKucoin.Client := oClient;
oClient.Active := True;
```

C++ Builder

```
TsgcWebSocketClient *oClient = new TsgcWebSocketClient();
TsgcWSAPI_Kucoin *oKucoin = new TsgcWSAPI_Kucoin();
oKucoin->Client = oClient;
oClient->Active = true;
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Kucoin oKucoin = new TsgcWSAPI_Kucoin();
oKucoin.Client = oClient;
oClient.Active = true;
```

4 · Kucoin | Futures Connect WebSocket API

In order to connect to Kucoin WebSocket API, just create a new Kucoin API client and attach to TsgcWebSocketClient.

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oKucoin := TsgcWSAPI_Kucoin_Futures.Create(nil);
oKucoin.Client := oClient;
oClient.Active := True;
```

C++ Builder

```
TsgcWebSocketClient *oClient = new TsgcWebSocketClient();
</code><code class="delphi">TsgcWSAPI_Kucoin_Futures </code><code class="cpp">*oKucoin = new </c
oKucoin->Client = oClient;
oClient->Active = true;
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
</code><code class="delphi">TsgcWSAPI_Kucoin_Futures </code><code class="csharp">oKucoin = new <
oKucoin.Client = oClient;
oClient.Active = true;
```

5 · Binance | Subscribe WebSocket Channel

Binance offers a variety of channels where you can subscribe to get real-time updates of market data, orders... Find below a sample of how to subscribe to a Ticker:

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oBinance := TsgcWSAPI_Binance.Create(nil);
oBinance.Client := oClient;
oBinance.SubscribeTicker('bnbbtc');

procedure OnMessage(Connection: TsgcWSConnection; const aText: string);
begin
// here you will receive the ticker updates
end;
```

C++ Builder

```
TsgcWebSocketClient *oClient = new TsgcWebSocketClient(NULL);
TsgcWSAPI_Binance *oBinance = new TsgcWSAPI_Binance(NULL);
oBinance->Client = oClient;
oBinance->SubscribeTicker("bnbbtc");

void OnMessage(TsgcWSConnection *Connection, const string aText)
{
// here you will receive the ticker updates
}
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Binance oBinance = new TsgcWSAPI_Binance();
oBinance.Client = oClient;
oBinance.SubscribeTicker("bnbbtc");

void OnMessage(TsgcWSConnection Connection, const string aText)
{
// here you will receive the ticker updates
}
```

6 · Bitmex | Subscribe WebSocket Channel

Bitmex offers a variety of channels where you can subscribe to get real-time updates of market data, orders... Find below a sample of how subscribe to a Trade Channel:

Delphi (VCL / FireMonkey)

```
oClient := TsgcWebSocketClient.Create(nil);
oBitmex := TsgcWSAPI_Bitmex.Create(nil);
oBitmex.Client := oClient;
oBitmex.Subscribe(btmTrade, 'XBTUSD');
procedure OnBitmexMessage(Sender: TObject; const aTopic: TwsBitmexTopics; const aMessage: string
begin
// here you will receive the trade updates
end;
```

C++ Builder

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Bitmex oBitmex = new TsgcWSAPI_Bitmex();
oBitmex->Client = oClient;
oBitmex->Subscribe(btmTrade, "XBTUSD");
void OnBitmexMessage(Sender: TObject; const aTopic: TwsBitmexTopics; const aMessage: string)
{
// here you will receive the trade updates
}
```

.NET (C#)

```
TsgcWebSocketClient oClient = new TsgcWebSocketClient();
TsgcWSAPI_Bitmex oBitmex = new TsgcWSAPI_Bitmex();
oBitmex.Client = oClient;
oBitmex.Subscribe(btmTrade, "xbtusd");
void OnBitmexMessage(Sender: TObject; const aTopic: TwsBitmexTopics; const aMessage: string)
{
// here you will receive the tradeupdates
}
```

Sources used to build this document

Every external claim links back to a primary source. The online-help references decode the canonical deep-link the company maintains for this component.

Primary standard / spec — Socket.IO v4 documentation	socket.io/docs/v4/
Primary standard / spec — Socket.IO protocol	socket.io/docs/v4/socket-io-protocol/
Online help — component page	www.esegece.com/help/sgcWebSockets/Components/APIs/API/API_SocketIO.htm
Component page	www.esegece.com/products/websockets/apis/socket-io/
Product page	www.esegece.com/products/websockets/

> **Document scope.** This document covers the publicly-documented surface of the Socket.IO API component shipped with sgcWebSockets. For full property, method and event reference consult the online help linked above.